WASTE MANAGEMENT POLICY

ÿ PERMITTING
ÿ RESOURCE RECOVERY
☒ REGULATORY INTERPRETATION
ÿ PROGRAM DEVELOPMENT
ÿ FIELD OPERATIONS
ÿ ADMINISTRATION

SUBJECT: Sham Recycling

POLICY NO.: VI.1.b. DATE 11-8-85

AUTHORITY: 401 KAR 31:010 and 401 KAR 36:040

On the basis of enforcement guidance given by the U. S. Environmental Protection Agency on March 16, 1983 (48 FR 11157-11160); the Division is adopting the following criteria to determine whether an operation is sham recycling or beneficial and legitimate recycling.

LEGITIMATE AND BENEFICIAL RECYCLING OF HAZARDOUS WASTES BY BURNING FOR HEAT RECOVERY

Burning of hazardous waste or hazardous waste-derived fuels in boilers or industrial furnaces will be considered legitimate recycling under 401 KAR 31:010 and 401 KAR 36:040 based upon the criteria specified in the regulations and a weighing of the following factors:

1. Energy value. The energy value of the hazardous wastes being burned or blended will be of primary significance in most cases. The wastes' energy value is especially significant if the wastes being burned have a heat value below commercial grade fuels. In these cases, the burning cannot recover sufficient energy to characterize the practice as legitimate recycling. “In other words, energy recovery is ancillary, and the wastes, for practical purposes, are being burned to be destroyed." As the U.S. EPA stated in the background guidance on May 19, 1980, "burning organic wastes that have little or no heat value in industrial boilers under the guise of energy recovery, " is not within the exemption for recycling (45 FR at 33093). Consequently, the burning of wastes with little or no heat value (i.e., wastes which are below the minimum heating value) as "fuels" will not be considered legitimate recycling.

2. Mixtures. The burning of mixtures of hazardous wastes as fuels or mixtures of hazardous wastes and non-waste fuels, when one or more of the hazardous waste components has little or no heat value is not considered legitimate recycling for the reasons cited above. The knowing addition of low-energy waste to a hazardous waste fuel will likely be considered sham recycling and thus not covered by the recycling exemption.

In determining whether hazardous wastes have little or no energy value, the benchmark shall be whether the wastes have a comparable heat value to low energy commercial fuels such as wood or low grade sub-bituminous coal. Examples of hazardous wastes having little or no heat value include carbon tetrachloride, chloroform, methylene chloride, trichloroethylene, 1,1,1- and 1,1,2-trichloroethane, certain polychlorinated biphenyls, and such pesticides as toxaphene, chlordane, and heptachlor. Attached as Appendix A is a partial list of hazardous constituents from 401 KAR 31:170 that have heat values well below commercial grade fuels. Hazardous waste fuels, whether burned alone or blended with higher energy wastes or fuels, will normally not be considered to be recycled legitimately.

3. Operating criteria. The degree to which wastes are consumed during burning and the net costs or savings resulting from operating the unit for waste to energy purposes may be considered in evaluating the applicability of the exemption to a particular situation.

Examples from the EPA enforcement guidance:

1. Company B generates a distillation bottom that is listed as a hazardous waste. B burns this waste in its on-site boiler. The waste has a heating value of 2000 Btu per pound.

   B is subject to regulation as a generator, as a storage facility (if it stores the waste for more than 90 days prior to burning it), and as an incineration facility. The waste is not being burned for energy recovery, but to be incinerated, because its heating value is well below that of low-grade commercial fuel. It does not matter whether B burns other material in the boiler for legitimate energy recovery. B still is not engaged in legitimate recycling activity when it burns a material with little or no fuel value. (Incidentally, this result is the same if the hypothetical distillation bottom exhibited a characteristic of hazardous waste instead of being listed.)

2. A fuel oil dealer, Company C, obtains waste oil from a number of different generators. C obtains hazardous waste spent solvents: carbon tetrachloride, methylene chloride, and trichloroethylene from other generators and mixes these wastes with the waste oil. These wastes contain very high concentrations of chlorinated solvents, and these solvents also are present in the blended fuels. C then sells the waste-derived fuel to apartment buildings and hospitals. These users burn the fuel in their boilers.

   Generators of the spent solvents are subject to regulation under 401 KAR Chapter 32, and the solvents must be transported to C's facility by a 401 KAR Chapter 33 transporter. C is a storage facility, assuming it stores the solvents before blending them with the waste oil. The blending operation constitutes hazardous waste treatment.

The waste-derived fuel that C sells remains subject to regulation as a hazardous waste because it contains hazardous waste chlorinated solvents that have little fuel value. (The heating values of these solvents are even lower than wood.) Consequently, these waste-derived fuels must travel with a manifest, be transported by a 401 K.AR Chapter 33 transporter, and be sent to permitted hazardous waste facilities. Distributors handling these wastes are hazardous waste storage facilities, and are subject to manifesting requirements when they initiate shipments to ultimate users. The persons who ultimately burn the fuel technically are hazardous waste incinerator facilities.

3. Company D generates waste oil and a variety of low energy spent chlorinated solvents that are listed hazardous wastes. D mixes the spent solvents with the waste oil and sends the mixture to a fuel blending facility, E, which processes the waste oil, and mixes it with virgin fuel oil. E then sells the blended mixture as a fuel.

   D is a generator, operates a hazardous waste treatment facility and also may be a storage facility if it accumulates the spent solvents for over 90 days.

   Ordinarily the mixture of spent solvents and waste oil that D generates remains a hazardous waste, for the same reason as in the previous example. The fact that D is a generator rather than a fuel blender makes no difference. D is still blending hazardous wastes with de minimis fuel value into fuels. Any burning of such wastes is not legitimate recycling. The blended fuel consequently remains subject to regulation as a hazardous waste in the fuel blender's (E’s) hands and in the hands of the ultimate users (as well as intermediate distributors). The ultimate burning, of the blended fuel constitutes incineration.

APPENDIX A. - LOW HAZARDOUS CONSTITUENTS LISTED IN 401 KAR 31:170

Hazardous Constituent	Higher Heating Value (Btu's/lb)
Tribromomethane	234
Tetrachloromethane	432
Hexachloroethane	827
Dibromomethane	899
Pentachloroethane	953
Hexachloropropene	1,259
Chloroform	1,349
Cyanogen bromide	1,457
Trichloromethanethiol	1,475
Hexachlorocyclopentadiene	2,015
Tetrachloroethene (Tetrachloroethylene)	2,141
Cyanogen chloride	2,320
Iodomethane	2,410
Tetrachloroethane, N.O.S.	2,500
1,1,1,2-Tetrachloroethane	2,500
1,1,2,2-Tetrachloroethane	2,500
1,2-Dibromomethane	2,572
1,2-Dibromo-3-chloropropane	2,662
Pentachlorobenzene	2,914
Bromomethane	3,058
Dichloromethane	3,058
Trichloroethene (Trichloroethylene)	3,130
Rexachlorobenzene	3,220
Bis (chloromethyl) ether	3,544
1,1,1-Trichloroeth	3,580
1,1,2-Trichloroethane	3,580
Pentachlorobenzene	3,688
Pentachlorophenol	3,760
Hexachlorocyclopentadiene	3,778
Hexachlorocyclohexane	3,813
Kepone	3,887
2,3,4,6-Tetrachlorophenol	4,011
Dichlorophenylarsine	4,155
Endosulfan	4,191
1,2,4,5-Tetrachlorobenzene	4,695
Bromoacetone	4,785
Dichloroethylene, N.O.S.	4,857
1,1-Dichloroethylene	4,857
Vinylidene chloride	4,857
Chlordane	4,875
Heptachlor epoxide	4,875
Phenylmercury acetate	4,875
Acety1 chloride	4,983
Trichloropropane, N.O.S	5,055
1,2,3-Trichloropropane	5,055
Dichloropropanol,N.O.S	5,109
Dimethyl sulfate	5,145
2,4,5-T	5,163
2,4,5-Trichlorophenol	5,181
2,4,6-Trichlorophenol	5,181

APPENDIX A. - LOW ENERGY HAZARDOUS CONSTITUENTS
LISTED IN 401 KAR 31:170 (Cont.)

Hazardous Constituent	Higher Heating Value (Btu's/lb)
N-Nitroso-N-methylurea	5,196
1,1-Dichloroethane	5,396
1,2-Dichloroethane	5,396
trans-1,2-Dichloroethane.	5,396
Phenyl dichloroarsine	5,612
N-Nitrososarcosine	5,738
Azaserine.	5,774
2-Fluoroacetamide	5,828
1,2,3,4,10,10-Hexachloro-1,4,4a,5,8,8a-hexahydro-1,4,5,8-endo, endo-dimethano-naphthalene	6,080
Benzenearsonic acid	6,116
Maleic anhydride	6,116
1,2,4-Trichlorobenzene	6,116
TCDD	6,170
Dichloropropene, N.O.S.	6,188
1,3-Dichloropropene	6,188
Endrin	6,224
Trinitrobenzene	6,224
Chloromethyl methyl ether	6,260
2,4-Dinitrophenol	6,332
Nitrogen mustard N-oxide and hydrochloride salt	6,404
Parathion	6,494
2,4-D	6,512
1,3-Propane sultone	6,602
Methyl methanesulfonate	6,728
Aldrin	6,746
Nitroglycerine	6,818
2,4-Dichlorophenol	6,854
2,6-Dichlorophenol	6,854
Hexachlorophene	6,871
Trypan blue	6,907
Benzotrichloride	7,015
Cycasin	7,105
N-Nitroso-N-ethylurea	7,105
Cyclophosphamide	7,141
Dichloropropane, N.O.S	7,178
1,2-Dichloropropane	7,171
Methylparathion	7,145
Uracil mustard	7,145
Amitrole	7,213
Dimethoate	7,231
Tetraethyl lead	7,267
4,6-Dinitro-o-cresol and salts	7,303
N-Methyl-N-nitro-N-nitrosoguanidine	7,303
Mustard gas	7,303
Dinitrobenzene, N.O.S.	7,485
N-Nitroso-.N-methylurethane	7,519
Nitrogen mustard and hydrochloride salt.	7,699
Hydrazine	7,967